

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named

Inventor : Muriel Pipelier et al.

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OF ONE SUCH SUBSTANCE

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EXHIBIT A  
OF  
DECLARATION UNDER 37 C.F.R. § 1.132

**Muriel Pipelier**

CEISAM- UMR-CNRS 6230, University of Nantes, UFR des Sciences et Techniques,  
2 rue de la Houssinière BP92208, 44230 Nantes cedex 03  
e-mail: [muriel.pipelier@univ-nantes.fr](mailto:muriel.pipelier@univ-nantes.fr)

- Since 2000, associate professor - CEISAM (ex-LSO) - and since 2008 "HDR" (Habilitation à Diriger les Recherches)
- Post-Doctorat (1998-1999) at the LSO - Univ. of Nantes - (research director: Pr. Dubreuil D.)
- Post-Doctorat (1996-1998) at the ETH in Zurich (research director: Pr. Vasella A)
- Ph-D in Organic Chemistry (1996) Paris XI University, Orsay (research director: Dr. Lukacs G.)

Research topics:

Heterochemistry: Synthesis of pyrroles derivatives by an electrochemical reduction of the corresponding pyridazinic compounds. The strategy is highly competitive to the chemical strategy and allows a large variety of substituants on the pyridazine ring. The synthesized derivatives find application in supramolecular chemistry (mimics of biological receptors) and in biology (anticancer agent). Synthesis of heteroaromatic derivatives for selective actinide/lanthanide extraction (collaboration with CEA)

Total stereoselective synthesis of marine derivative with biological activity: fulvol acetate.

Carbohydrate chemistry: new glycosylation strategy. Synthesis of galactosylceramides from marine sponge of potent biological activity, synthesis of nucleosides and nucleotides analogues.

Collaborations: CEA, INSERM (CRCNA), Univ. du Mans, Nantes et Angers, Canceropole Grand-Ouest

Founding: CEA, La Ligue contre le Cancer, L'ARC, Canceropole grand ouest, Région pays de la Loire, ANR PCV et Blanc, Univ. Nantes et CNRS

Publications: 6 patents, 30 publications

*The last publications:*

Urgin, K.; Barhdadi, R.; Condon, S.; Léonel, E.; Pipelier, M.; Blot, V.; Thobie-Gautier, C.; Dubreuil, D. Some Mechanistic Aspects of a Nickel-Catalysed Electrochemical Cross-Coupling between Aryl

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Halides and Substituted Chloropyridazines. *Electrochimica Acta* **2009**, accepté.

- Lacone, V.; Hunault, J.; Pipelier, M.; Blot, V.; Lecourt, T.; Rocher, J.; Turcot-Dubois, A. L.; Mariohneau, S.; Douillard, J. Y.; Clement, M.; Le Pendu, J.; Bonneville, M.; Micouin, L.; Dubreuil, D., Focus on the Controversial Activation of Human iNKT Cells by 4-Deoxy Analogue of KRN7000. *Journal Of Medicinal Chemistry* **2009**, *52*, 4960-4963.

- Bakkali, H.; Marie, C.; Ly, A.; Thobie-Gautier, C.; Graton, J.; Pipelier, M.; Sengmany, S.; Leonel, E.; Nedelec, J. Y.; Evain, M.; Dubreuil, D., Functionalized 2,5-dipyridinylpyrroles by electrochemical reduction of 3,6-dipyridinylpyridazine precursors. *European Journal Of Organic Chemistry* **2008**, 2156-2166.

- Sengmany, S.; Leonel, E.; Polissaint, F.; Nedelec, J. Y.; Pipelier, M.; Thobie-Gautier, C.; Dubreuil, D., Preparation of functionalized aryl- and heteroarylpyridazines by nickel-catalyzed electrochemical cross-coupling reactions. *Journal Of Organic Chemistry* **2007**, *72*, 5631-5636.

- Naud, S.; Pipelier, M.; Viault, G.; Adjou, A.; Huet, F.; Legoupy, S.; Aubertin, A. M.; Evain, M.; Dubreuil, D., Synthesis of polyhydroxylated pyrano-pyrrole derivatives from carbohydrate precursors. *European Journal Of Organic Chemistry* **2007**, 3296-3310

- Naud, S.; Pipelier, M.; Chaumette, C.; Viault, G.; Huet, F.; Legoupy, S.; Dubreuil, D., Synthesis of novel polyhydroxylated tetrahydropyranopyrroles. *Synlett* **2007**, 403-406.

- Ane, A.; Naud, S.; Lacone, V.; Vidot, S.; Fournial, A.; Kar, A.; Pipelier, M.; Dubreuil, D., Unusual anomeric rearrangement of para-nitrobenzoylxanthate D-glycosides: a new direct stereoselective access to thioglycosides from pyranose sugars. *Tetrahedron* **2006**, *62*, 4784-4794.

- Bujoli, B.; Roussiere, H.; Montavon, G.; Laib, S.; Janvier, P.; Alonso, B.; Fayon, F.; Petit, M.; Massiot, D.; Bouler, J.-M.; Guicheux, J.; Gauthier, O.; Lane, S. M.; Nonglaton, G.; Pipelier, M.; Leger, J.; Talham, D.; Tellier, C., Novel phosphate-phosphonate hybrid nanomaterials applied to biology. *Progress in Solid State Chemistry* **2006**, *34*, 257-266.

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- Dubreuil, D.; Pipelier, M.; Pradère, J.-P.; Bakkali, H.; Lepape, P.; Delaunay, T.; Tabatchnik, A. Composés pyridaziniques et pyrroliques, procédés d'obtention et applications. FR2904315 (A1), **2008**.

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